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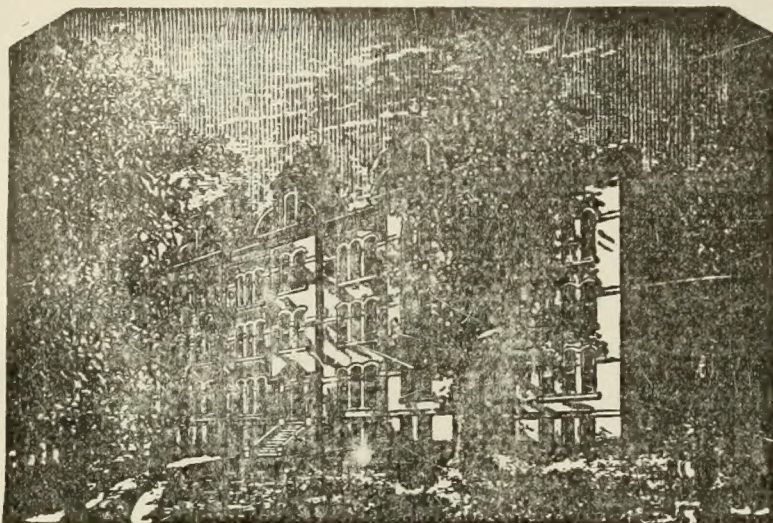
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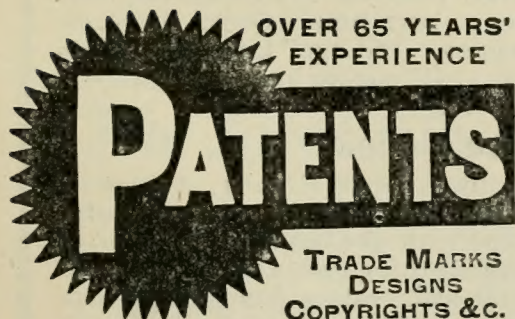
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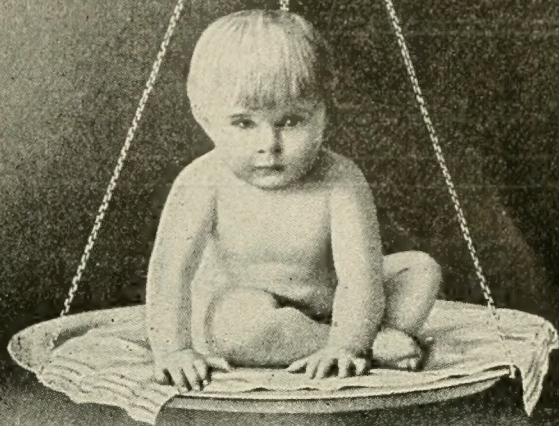
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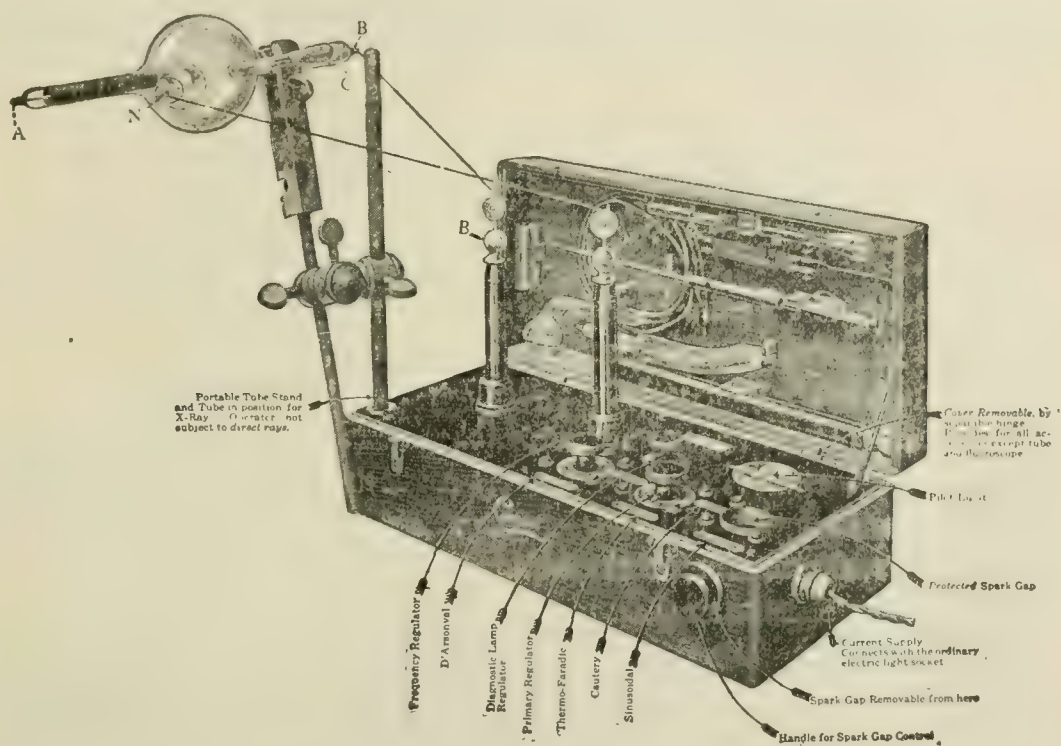
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stimulants were seldom used during the operation. In a few cases strychnine was given hypodermically, not as an urgent necessity but as a precautionary measure.

We give morphine gr. $\frac{1}{4}$ and atropine gr. 1-150 hypodermically an hour before operation, as it renders the patient more amenable to the administration of the anesthetic. We have found nothing which will prevent post-anesthetic nausea. Chloretone in 15-grain doses several hours before operation seems to be somewhat effective. Whether this is due to the action of chloretone *per se* or is simply due to the fact that less anesthetic is used, is a question hard to answer.

Experience has taught us that in most cases the long, free incision is preferable to the short incision, not only because free access is given to the field of operation, but also since less trauma is inflicted on the tissues, wound healing is more rapid and secure.

We have found catgut prepared after the iodine method of Claudius in every way satisfactory. In no case have we been able to trace infection to such suture material. For retaining sutures we still use silkworm gut, and for the skin employ Michel's skin clips. For closure of abdominal wounds, serial suture with catgut of peritoneum and fascia with through and through silkworm gut sutures, including all the tissues down to the peritoneum, but not including that membrane. The through and through sutures we believe very important, since otherwise spaces are left in the wound for the collection of effusions which materially interferes with wound healing. In the few cases in which these deep sutures have been omitted, the healing has nearly always been somewhat retarded and in several instances bloody serum has collected.

We make no attempt to hasten the dismissal of patients from the Infirmary, since we still believe healing after abdominal section will occur more rapidly and more satisfactorily if the wound is kept at perfect rest, and such rest can not be obtained if the patient leaves his bed prematurely. We think the practice of letting laparotomy patients out of bed as early as the sixth day little short of criminal, though we realize it would be a good advertisement would our conscience permit it.

Ventral herniæ have been very rare sequences of operations handled in this way.

Much credit is due Miss M. M. Sproull, our head nurse, and her staff of nurses for efficiency and attentiveness, both in the preparation of patients for operation and for excellent attention in the after care. We attribute much of the success attained to this important factor in the treatment of the patients.

Case No. I. Gall Stones—Cholelithotomy. Miss Mattie D., æt. 24 years, Alexandria, Tenn. Admitted September 4. This patient had suffered frequently from severe paroxysms of pain, marked tenderness in the right hypochondrium, pronounced icterus, and presented distinct tenderness in the region of the gall bladder and tenderness on perpendicular percussion. Under A. C. E. anesthesia, September 5, the gall bladder was exposed through a six-inch incision along the outer border of the right rectus muscle, and this viscus was walled off from the peritoneal cavity with gauze. The distended gall bladder was aspirated and two ounces of fluid evacuated. An incision was then made into the gall bladder and three spherical calculi removed. The ducts were then examined and found free. A large rubber drain was inserted into the gall bladder and secured by a double purse string of catgut. A second tube was carried down to the cystic duct. The wound was closed by seriatim sutures reinforced by four deep worm-gut sutures. The calculi were of the mulberry variety, about the size of a large garden pea and identical in size and shape. The drains were removed on the 10th day, the drainage continuing until the 15th day. The patient was dismissed September 26.

Case No. IV. Papillomatous Cysts of Ovary. Miss A. G., æt. 40 years, Davidson County, Tenn. Admitted September 14. This patient had been a great sufferer for a long period and had noticed an abdominal enlargement in the lower zone for a number of months. Under A. C. E., September 15, the abdomen was opened by six-inch incision in the middle line. On opening the peritoneum, a large amount of ascitic fluid escaped. A mass of small cysts was clustered about the left ovary and the uterus and

intestines were studded with papillary growths. The left ovary and tube were removed and as much of the papillary growths as was possible was removed. Very little hemorrhage. A large glass drainage tube was introduced and the wound was closed in the usual manner. The patient recovered slowly from the severe operation and was dismissed October 8.

Case No. VII. Curettage for Dysmenorrhea. Miss C. R., æt. 21, Nashville, Tenn., was admitted October 3, giving a history of dysmenorrhea of several years standing which had resisted all the usual remedies. Under chloroform anesthesia the cervix was dilated, the uterine cavity curetted and treated with tincture of iodine. Gauze packing was introduced and allowed to remain twenty four hours. Iodine treatment on alternate days was instituted and the condition of the patient was greatly improved when she was dismissed October 18.

Case No. VIII. Oöphorectomy, Appendectomy. Miss L. S., æt. 26, Erin, Tenn., entered October 11. This patient had just recovered from an unusually severe attack of appendicitis. Under A. C. E. anesthesia the abdomen was opened in the middle line, the appendix, which was bound down by dense adhesions, especially near its tip, delivered and removed in the usual manner. Examination of the uterus and adnexa showed the left tube and ovary so seriously involved that removal was necessary. The abdominal wound was closed with the customary serial sutures of catgut reinforced with deep silkworm gut sutures. The recovery was uneventful and the patient was dismissed on October 28.

Case No. XIV. Recurrent Carcinomatous Nodules After Removal of the Breast. Mrs. K. B., æt. 61, Nashville, Tenn., entered Infirmary October 21. The patient had been operated for carcinoma of the breast two years ago. The recurrence had only recently been noticed, and while within the field of operation it was at some distance from the old cicatrix. Under A. C. E. anæsthesia the nodules were removed through one free incision which was made well beyond the borders of the growths. A rubber drain

was inserted and the wound closed with catgut sutures. The patient was dismissed November 2. There has been no return to date.

Case No. X. Carcinoma of Eyelid. Miss M. B., æt. 20, College Grove, Tenn., was admitted October 15, suffering from an epitheliomatous ulcer of the external canthus of the left eye. The lateral wall of the orbital fossa, the conjunctiva and the external aspect of the eyeball itself were all infiltrated by the neoplasm. Sight had been lost for several months. Under A. C. E. the eyeball was removed, the orbital cavity cleared of its contents, the diseased parts of the bone curetted away and the affected portion of the lids and adjoining skin freely removed. The cavity left by the rather radical procedure was packed with gauze and the skin wound closed where possible with interrupted sutures. The wound filled slowly with granulations and the patient was dismissed November 4.

Case No. XVI. Double Talipes Equino-varus. Phelp's Operation. Marion L., 3½ years from near Burnside, Ky. Admitted Oct. 22. The patient presented extreme talipes equino-varus of both feet.

Under chloroform, the tendo Achilles of both feet was subcutaneously divided, the astragalo-scapoid articulation opened with a free incision on the inner border of each foot and all constricting bands and ligaments divided. The incisions were packed with gauze and the feet encased in plaster of Paris strengthened by wire gauze in the over-corrected position. The splints were removed in two weeks and light braces adjusted. The wounds filled up and healed nicely and the patient was dismissed in the fourth week with the deformity entirely relieved and with every prospect of a complete cure.

Case No. XVIII. Excision of Suppurating Gland of the Neck. J. C., æt. 54 years, St. Louis, Mo. Admitted October 20 for treatment of a suppurating cervical gland situated in the superior carotid triangle. The sinus discharged almost constantly, causing him

great annoyance. The parts were anesthetized with novocain and adrenalin solution and the diseased gland removed between elliptical incisions. The skin wound was closed with continuous catgut suture. Prompt healing followed and the patient was dismissed on the 5th day.

Case No. XX. Uterine Fibroid—Abdominal Hysterectomy. Mrs. J. R., æt. 43 years, Cheatham County, Tenn. Entered October 25 for relief of abdominal enlargement of several years standing. The patient first noticed the swelling in 1911 and observed that it was gradually becoming more perceptible. When she presented herself the swelling was as large as a seven months' pregnancy. The swelling was somewhat irregular over its surface, hard, painless and movable. The percussion note was dull. She had excessive menorrhagia and occasionally metrorrhagia. A probe introduced through the cervical canal passed to a depth of six inches.

Under A. C. E. the tumor was exposed by a five-inch median incision and the uterus and appendages removed. The broad ligaments were secured with strong silk braid ligatures and sutured from side to side with catgut sutures so as to cover all raw surfaces. The abdominal wound was closed in the usual manner. Uninterrupted recovery followed and patient returned home in three weeks.

Case No. XXI. Urethral Stricture—Divulsion. J. D. C., æt. 42 years, Lebanon, Tenn. Admitted November 4, suffering from a urethral stricture of long standing. The patient presented the usual symptoms of urethral obstruction, viz., gradual diminution in size of stream until it was a mere dribble, pain and frequency of micturition. The stricture was located just in front of the bulbomembranous urethra. The smallest conical sound could not be passed and only after repeated efforts could a filiform guide be passed. After passing the filiform, under A. C. E. anesthesia, a tunnelled Gouley divulsor was passed over the guide and the divulsor slowly opened to its fullest extent. Number 18, 19, and 20 American gauge sounds were then successfully passed. The

after treatment consisted in the passage of sounds every other day until the patient was dismissed with instructions to use a full-sized sound once a week for an indefinite time.

Case No. XXIV. Irregular Amputation of the Fingers. B. M., æt. 30 years, city. Admitted November 18. While at work repairing in his automobile shop, the patient had his hand caught in the machinery in such a manner as to have four fingers of the righthand cut off slightly anterior to the metacarpo-phalangeal articulation. There was present also considerable laceration of the dorsum of the hand. The thumb escaped injury. Under A. C. E. the hand was painted with iodine, the stumps of the fingers trimmed off and irregular skin flaps were secured, conserving as much as possible. A good result was obtained.

Case No. XXV. Appendectomy and Bassini's Operation for Hernia. Admitted November 21. N. M. M., æt. 29, had worn a truss for several years and appendicitis developing, a double operation was decided upon. With A. C. E. anæsthesia the operation by Bassini's method was done on the left side, using kangaroo tendon for the deep sutures and the skin wound closed with continuous catgut suture. The abdomen was then entered through the usual incision in the right semilunar line and the appendix delivered and removed. The appendical stump was buried with catgut purse string suture. The patient did well for four days, when infection set up in the appendical wound without appreciable cause, and the patient died of septicæmia on the eighth day.

Case No. XXV. Necrosis of Mandibular Alveolus. Miss D. C., æt. 29 years, Sardis, Tenn., entered November 23. The patient presented a swollen gum at the site of the right canine tooth from which there was a constant discharge of pus through a fistulous orifice. A probe passed into this opening came in contact with dead bone. All the teeth had been extracted some months before on account of continuous suffering. Under A. C. E. the mucous membrane was incised and the bone exposed. Two exfoliated pieces of dead bone were removed and the surface of the

bone curetted. The wound cavity was packed with gauze and the wound dressed daily. The patient was dismissed December 6 with the cavity well filled with healthy granulations.

Case No. XXIX. Schirrus of the Breast. Excision. Mrs. J. D. M., æt. 51 years, Tullahoma, Tenn., admitted December 2, for disease of the left breast. The growth was first noticed about eighteen months before and was hard, nodular, not tender and situated in the lower quadrant of the breast. The axillary glands were involved. Under A. C. E., December 3, excision was effected by elliptical incisions, one of the incisions being extended so as to open up the axilla. The breast and pectoral fascia were thoroughly dissected from the muscle. A number of glands were removed from the axilla, the vessels and nerves being well exposed by the dissection. The wound was closed with drainage. Healing was satisfactory and the patient dismissed in ten days.

Case No. XXX. Intravenous Injection of Neosalvarsan. J. A., æt 33 years, city. Admitted December 27. This patient had contracted syphilis twelve years ago and had undergone vigorous specific treatment with apparent success. On admission he presented an eruption on his face most marked upon his forehead and a Wassermann's test had proven positive. The median basilic vein was exposed under local anesthesia and a solution of .09 cc. of neosalvarsan was introduced. A slight reaction was manifested and the eruption promptly disappeared. Antisyphilitic treatment was resumed.

Case No. XXXII. Abscess of the Sheath of the Left Rectus Abdominis Muscle. R. H., æt. 28 yrs., city; entered Jan. 5. This patient had had an abscess of the left inguinal glands several months prior to admission, from gonorrheal infection. Evacuation had been accomplished by free incision and the wound had completely healed. In December, several months after the bubo had been relieved, a swelling appeared above the pubis slightly to the left of the mesial line which seemed desistant and very deeply placed, but was not painful or tender. Under A. C. E., January 6, a free

incision was made over the swelling through the skin, fascia and aponeurosis. The rectus muscle was exposed, and by separating its fibres the abscess was reached and the pus, about two ounces, evacuated, and the cavity packed with gauze. The abscess was evidently residual in character. Prompt recovery.

Case No. XXXIV. Ovariectomy. Mrs. A. T. E., æt. 38 years, Putnam County, Tenn. Entered January 14 for treatment of abdominal swelling. Examination showed marked swelling in the lower abdominal region which extended to the umbilicus. The percussion note was dull; there was some fluctuation and on palpation the surface was smooth. Vaginal examination disclosed a high cervix displaced somewhat to the left, while there was fullness to the right of the womb. Diagnosis, ovarian cyst. Under A. C. E. anæsthesia a four-inch incision was made in the linea alba, the glistening wall of the cyst exposed and about one and a half gallons of clear straw-colored fluid evacuated with a Spencer Wells trocar. After securing a rather thin pedicle with silk braid ligature, the sac was readily removed. The growth was from the right ovary. The left ovary was found healthy and was not disturbed. The wound was closed by suturing the peritoneum with catgut, the fascia, muscle and skin were transfixed from side to side with silkworm gut sutures, the deep fascia closed with several interrupted sutures of catgut, after which the silkworm gut sutures were tied. Skin clips were used between the silkworm sutures. The patient recovered rapidly.

Case No. XXXVII. Perineal Abscess. H. H., æt. 24 years, Atlanta, Ga. Admitted January 27. This patient had severe epididymitis from gonorrheal infection for which he had been operated upon and subsequently a painful swelling appeared in the middle line of the perineum which was diagnosed as prostatic. The enlargement seemed too superficial to be prostatic. It was about as large as a walnut, hard and elastic and very tender upon pressure. Rectal examination showed that it was anterior to the prostatic gland. Under A. C. E., January 27, the swelling was incised in the middle line and about an ounce of pus evacuated.

There seemed to be no communication of the cavity with the urinary passage. The wound was packed with gauze which was renewed on alternate days until the cavity was filled with granulation tissue.

Case No. XXXIX. Curettage of the Womb for Metrorrhagia. Mrs. A. R. B., æt. 28 years, Davidson County, Tenn. Admitted Jan. 28 for treatment of obstinate metrorrhagia of several months duration. The uterine cavity was normal in depth and the presence of fibroids could not be ascertained. Under A. C. E., Jan. 30, the os uteri was dilated and the uterine cavity curetted with both sharpe and dull curettes after which the cavity was packed with gauze and every other day treatment with iodine instituted. The patient was dismissed February 10 greatly improved.

Case No. XLI. Cyst of the Eyelid. Mrs. J. H., æt. 42 years, Nashville, Tenn. Admitted January 31. A cyst of the upper lid of the left eye, the size of a hazelnut. Its location and size interfered with the closure of the lids. The parts were anæsthetized with novocain-adrenalin. The cyst dissected out entire and the wound was sutured with catgut. Healing was satisfactory.

Case No. XLIII. Oöphorectomy and Appendectomy. Mrs. J. F. H. æt. 32 years, Paris Tenn. Admitted February 10. The patient had suffered several years with pelvic trouble referred principally to the left side. Recently the addition of several attacks of sharp pain in the region of the appendix led her to consider operative relief. Examination revealed a distinct mass in the left broad ligament. Pain and marked tenderness over the appendix. Under A. C. E. anesthesia the abdomen was opened by a six-inch incision in the middle line and the left ovary, enlarged and cystic was pried out of dense adhesions and together with the tube removed. The appendix was delivered with some difficulty on account of close adhesions and removed. The routine method of disposing of the appendical stump by purse string suture invagination was carried out. The ventral wound was closed by serial suture of the peritoneum and fascia supplemented

by deep sutures of silkworm gut. Recovery was uneventful and the patient returned home March 1.

Case No. XLIV. Dudley's Operation for Sterility. Mrs. S. G., æt. 25, Glasgow, Ky. Admitted February 18. This patient presented a marked degree of edometritis and was anxious for a child. Under A. C. E. anæsthetization the cervix was dilated and the cavity of the uterus was thoroughly curetted. The steps of Dudley's operation for sterility were carried out. The healing was satisfactory and the patient was dismissed March 12.

Case No. XLVI. Chronic Appendicitis. F. P., æt. 24, Nashville, Tenn. Admitted February 23 because of constant suffering from pain and tenderness of such a nature as to point to a colitis. Under A. C. E. anæsthesia the abdomen was opened through the right linea semilunaris, the appendix sought and delivered after breaking up some strong adhesions which had caused a kink near the distal extremity. The appendix was removed and the stump buried in the usual manner. Serial suture reinforced by deep wormgut sutures was used in closing the abdominal wound. Stitches were removed on the seventh day and the patient left the Infirmary March 10.

Case No. XLVIII. Colles' Fracture. Miss I. G., æt. 60, city. This patient whose eyesight was bad was struck and knocked down by a buggy while crossing the street. Her right hip was severely injured and the right radius was fractured near its distal extremity. The usual silver fork deformity was marked. By hyperextension and pressure on the upper end of the lower fragment, the deformity was reduced and immobilization maintained with a Levis splint. The patient had to remain in the infirmary for 15 days because of the attendant injury to the hip.

(To be concluded.)

A RARE CASE OF DYSTOCIA DUE TO FOETAL ASCITES.

BY JOHN S. HAWKINS, M.D., CEDAR HILL, TENN.

On May 1, 1915, I was called to see B. L., colored, and I found her five months' pregnant, and I soon found out that she was wanting an abortion produced; so I told her that she had called the wrong man, and I picked up my grip and left.

On May 28 I was called to see her again and found her abdomen distended to its utmost capacity. The distention was so great that it had caused the lower end of the sternum to turn up like a pothook and breathing was very difficult on account of the pressure. The abdominal walls were so tight it seemed as if they would burst, and she said that she felt as if they would. At this last visit I found her having labor pains. I made an examination and found the cervix dilated about two inches. I stayed with her three hours and during this time the cervix did not dilate but very little more.

In examining her I detected a mass presenting, but was sure that it was not the membranes, though it seemed to be a bag of waters of some character. I introduced my fingers as far as I could, but could not feel the child. After some time she had a very hard pain and the presenting bag ruptured, and while I had no way of measuring the amount of water that escaped, I think I am safe in saying there were three gallons of water, and it was expelled with so much force it could be heard in the adjoining room, and it took several minutes for all the water to be expelled. In a few minutes after the water passed she had another pain and a six months' fetus passed. In the median line of the abdomen of the foetus was a rupture through the walls about two inches long. Now the peculiar point is that all this water was in the child's abdomen and that it was that part that presented. It would have been impossible for the child to have been delivered had not this rupture taken place.

On examination of the child I found its head as flat as a board and its face looked like a painted picture on card board. Its feet

were turned in the opposite direction from the face; its knees were grown together, and I could not tell whether it was a male or female.

Through the opening in the abdomen I could see the internal organs, and they seemed to be normal. The child breathed several times.

I report this case because I have never read or heard of a case like it.

Selected Articles

THE USE AND ABUSE OF PITUITRIN IN OBSTETRICS.

The *American Journal of Obstetrics* for May, 1916, contains an article by Norris. He reminds us that pituitrin was first used in obstetric practice five years ago, and that its rapid acceptance throughout the obstetric world attests its merits.

As far as the writer's knowledge and experience has taught him, the ideal safety zone would include the following class of cases: Multiparæ, with histories of previous normal labors, in whom there are no serious cardiac, cardiovascular, or nephritic degenerative changes; the second stage of labor has begun; the presentation and mechanism are normal; the bag of waters is unruptured; the vaginal canal relaxed. One intramuscular injection of 1 cc. of pituitrin will usually in such a case, in almost magic manner, end the labor within the hour. For the sudden and violent pains induced, ether analgesia is always employed, and to forestall the real danger of uterine relaxation within an hour after delivery a hypodermic injection of ergot aseptic is always to be given immediately after the birth of the child. It has been repeatedly stated that pituitrin is always contraindicated when labor is progressing normally, but for the particular class of cases just described the writer believes its use is justified, even with a normally progressing labor, for the avowed purpose of shortening the hours of suffering to a very few minutes. During those minutes ether administered to the degree of producing temporary unconsciousness at each recurring pain will produce amnesia, prevent nerve exhaustion and relieve pain. This method for multiparæ some of the writer's patients have designated the "afternoon" or "midday jag," which they say, and the writer believes, is far superior to "twilight sleep." The only inconvenience observed from this method is an occasional increase in afterpains, the inconvenience of which the patient endures when such pains are explained as "blessings in disguise" to prevent undue bleeding and promote

involution. Codeine or morphine in small repeated doses throughout a day will relieve the after-pains if extreme.

The danger zone of pituitrin in obstetric practice must be approached with more circumspection and requires more detailed study. The gravity of the patient, the condition of the uterine muscle, especially of its lower segment, and of the cervix and the vagina; the history of prior Cæsarian section; the presentation and position (whether face, brow, shoulder, twins, breech, arrested posterior position) and a study of the mechanism and its progress; the size and shape of the pelvis; the presence of tumor or placenta previa, hydrocephalus or monster; knowledge of the patient's general condition that would be jeopardized by a rise, even for a short period, of her blood pressure, such as toxemia, myocarditis, arteriosclerosis, or grave nephritis—all these factors in obstetric diagnosis should be known and appreciated and may render the use of pituitrin a highly dangerous addition to the careless or fearless obstetrician's equipment. Some of the conditions just enumerated occupy border-line positions of danger and deservedly require further discussion. For examples—the full or half initial dose to primiparæ; the desirability of using pituitrin in preference to forceps in posterior positions, or when there is minor degree of pelvic disproportion, to insure molding and adaptation before difficult forceps deliveries; its use in certain types of placenta previa, and even in eclampsia.

The most serious contraindications, to the writer's mind, are mechanical obstacles to labor and an undilated and unyielding cervix. For the former the slow adaptation and molding under nature's unaided guidance provides safety not to be obtained by the sometimes unexpected violent and tumultuous action of pituitrin. While it is true that the mechanical dilator has taught us that the danger of lacerating a cervix is greatest when the dilatation is at the last stages, pituitrin in the earlier stages finds a mechanical obstacle in the cervix, and its greatest danger then is to the child and the placenta. It has been the writer's practice never to give more than half-doses to primiparæ prior to the complete dilatation of the cervix, and when moderate disproportion exists, the slow, skilled use of forceps is preferred. It has been

claimed that pituitrin, by reducing the frequency of forceps deliveries, has won a triumph in thus avoiding shock, injury to the child's head, and serious injuries to the soft tissues; by diminishing the risk of infection and saving hours of suffering. In difficult forceps its preliminary use has rendered the operation easier through better adaptation and engagement of the head. These arguments hold good for multiparæ, and for primiparæ after satisfactory dilatation of the birth canal, in whom inertia has developed and the indications for forceps are present. The same obstetric judgment required for the timely forceps delivery will often choose pituitrin with advantage to the patient. The glamour of pituitrin, however, should not make us act too soon. Let us always remember that in the group of cases with slight mechanical obstacle uterine inertia is the indication for pituitrin as it is for forceps. To correct abnormal mechanisms, the value of vigorous uterine action is well known, and pituitrin again finds a valuable field in posterior positions of the occiput delayed at the inlet or to assist anterior rotation of the occiput or face. The inertia of breech or twin labors or when there is hydramionis furnishes other important uses for this agent. Its value in placenta previa after bag insertion or version is questioned, and its careful use in half doses after the bougie has evoked pains in induced labors has certainly been of advantage in the writer's experience. A very large proportion of multiparæ at term can be safely thrown into active labor by manual dilatation of the cervix to incite pains which will persist and grow stronger rapidly under a full dose of pituitrin. After the effect of this dose has worn away, in one to three hours, the cervix is fully opened and a second dose will rapidly terminate the labor. For the control of postpartum bleeding and to promote uterine contraction during Cæsarian section the writer's experience has taught him not to rely upon it alone but to always combine it with ergot, for he has had several experiences that make him believe the dose of pituitrin, while acting much more quickly than ergot, loses its effect more promptly and gives one a false sense of security that sometimes offers a rude awakening when the ergot is omitted.

The possible danger of administering pituitrin, when grave structural organs have resulted from such diseases as myocarditis, arterial sclerosis, chronic nephritis, and profound toxemia with or without eclampsia, have not been definitely determined by experience. Until our knowledge is greater these diseases had better be classed in the danger zone.

Effects upon the Infant—Slowing of the fetal pulse is observed, after the mother has exhibited the signs of absorption of pituitrin. Before the effects upon the mother have begun to wane the fetal heart-beat resumes its normal rhythm. At birth the infant is sometimes pale, and there may be evidence of meconium discharges. These effects, probably due to the action of the drug upon the cutaneous circulation and upon the muscular coat of the intestines, are more likely to appear when the dosage has been excessive, either in size or frequency. In the writer's experience they have not been observed when the total dosage has not exceeded 2 cc. and the interval between doses has not been less than two hours. The relation between fetal asphyxia and violent and prolonged action and overdosage with pituitrin is one to be borne in mind. The writer has credited his experience of freedom from asphyxia to the facts of careful dosage and the invariable use of ether with the onset of vigorous, prolonged contractions. Ether apparently checks the tumultuous character of the contractions and at the same time relieves the extreme suffering.

The danger of detachment of the placenta, following violent and prolonged uterine contractions, in the earlier stages of labor must be a real danger. Such cases have been reported.

Dosage—The efficiency of the various preparations seems to be increasing with proper standardization. Pituitrin in 1-cc. ampoules has with very few exceptions been efficient. It should not be used after the date specified on the container.

The tumultuous action sometimes observed from a full dose, whether due to the patient's susceptibility or to the failure in standardization the particular dose, has made the use of a full initial dose in primiparæ infrequent in the writer's hands. The first dose usually shows more marked effect upon the uterus than

it does upon blood-pressure, unless there is an interval of three or more hours between doses.

If pituitrin were dispensed in doses equivalent to half the present size, its usefulness would not be diminished; its dangers would be lessened.

An analysis of 106 cases in private practice offers the following facts:

(a) Primiparæ, 40 per cent of the cases; multiparæ, 60 per cent of the cases.

(b) Administered in the first stage, 40 per cent; second stage, 34 per cent; first and second stage, 26 per cent.

(c) Before dilatation of cervix, never more than $\frac{1}{2}$ cc. to primiparæ. After dilatation the dose was occasionally 1 cc. To multiparæ with yielding or fully dilated cervixes, the dose was always 1 cc. The maximum dose to any case was $3\frac{1}{2}$ cc. in four doses.

(d) *Relation to Forceps*—Thirty per cent of all cases to which pituitrin was administered were delivered with forceps—*i. e.*, it was successful in 70 per cent of the forceps deliveries; 85 per cent were in primiparæ; 15 per cent in multiparæ.

(e) *Duration of Labor after Administration of Pituitrin*—In multiparæ, when the drug proved efficient, delivery occurred within an average of one hour and eight minutes; in primiparæ, three hours and eighteen minutes after the last dose. In 70 per cent of primiparæ who had received from one to four doses (sometimes half-doses, always full doses after the cervix was dilated), the forceps was required to end the labor. This study verifies the experience of others that the first dose very often is the most efficient, and that the value of pituitrin is greater in multiparæ.

(f) *Its Value to Fortify the Pains of Induced Labor*—Primiparæ, labor induced with rectal tube: After the pains had begun the action of pituitrin seldom failed to hasten the onset of active labor. Multiparæ, at term, after castor oil (ounces ij) and manual dilatation and gentle separation of the lower pole of the sac: The dilatation was kept up intermittently for ten to thirty minutes, until pains were thereby regularly brought on. Pituitrin, assisted by dilatation, promptly brings on labor and often speedily

ends labor within an average of three or four hours, following a single dose. A repeated dose, after an hour or two, will then rapidly end the labor.

Relation to Lacerations—Labor is multiparæ, the final stage being conducted under ether and with counter-pressure upon the head to resist precipitate delivery through the vulvar ring, has not been followed by a greater proportion of lacerations than is usual without pituitrin. In primiparæ, having avoided full doses, the increased number of lacerations that are said to occur were not observed.

Hemorrhage—Four cases of free bleeding were noted: One of alarming hemorrhage required packings, and in one case of Cæsar section its use without the association of ergot caused collapse from hemorrhage, requiring intravenous transfusion of salt solution. Ergot should always be used to reënforce the action of pituitrin to prevent and control hemorrhage.

Asphyxia—In none of the cases was gross asphyxia noted. None of the infants perished. There was no maternal mortality.

From these experiences the following pituitrin aphorisms are drawn:

1. Never use pituitrin without exhausting your abilities in obstetric diagnosis.
2. Healthy multiparæ with relaxed birth canals offer the widest and safest fields for its use.
3. For inertia in the early stages of labor, the sleep of morphine, chloral, or scopolamine is preferred; in the advanced stages of labor pituitrin will often wisely keep your forceps innocuous.
4. Ether hilarity and quick pituitrin labor in multiparæ is a good practical substitute for "twilight sleep."
5. The uterus, after pituitrin's tumultuous visitation, usually needs the steady hand of ergot.
6. Half-doses are more often to be employed than full doses.—*The Therapeutic Gazette.*

Extracts from Home and Foreign Journals.

SURGICAL

TREATMENT OF ERYSIPELAS WITH CARBOLIC ACID AND ALCOHOL.

A. Judd details this method of treatment as follows: There is painted carefully with a swab of cotton upon an applicator the entire surface of the involved area, and extending about a half inch into the surrounding apparently healthy skin, 95 per cent carbolic acid. This is left until the purplish color of the inflamed area is replaced by a pretty complete whitening of the skin. It is essential to the success of the procedure that we await this whitening before one proceeds to the next step. On the other hand, if one allows the whitening to proceed to a thorough blanching, one produces a distention of the epithelium, a slough of the skin, which, while it will not produce a scar, will prove painful to the patient, delay the result, and add nothing to the efficacy. When large areas are involved it is advisable that only a portion be painted at one time. The second step consists in going over the whitened area very thoroughly with a second swab saturated with alcohol. If this swabbing is done thoroughly the whitened area becomes once more pink, and the alcohol must be laid on until this is accomplished. After this one proceeds with other areas with the carbolic, neutralizing with alcohol, until the operation is complete at one sitting. It is essential to include half an inch of the apparently sound skin, as the bacteria of erysipelas are found beyond the apparently involved area. In some of the author's first cases he neglected this precaution, and found in twenty-four hours that, while he had completely controlled the initially inflamed area, a ring of newly inflamed tissue extended out in all directions beyond, much as an advancing ringworm extends. The method includes the painting of the hairy scalp, the eyelids, the mucous membrane of the alæ of the nose, and the nipple of the breast, if necessary. The author failed to note any evil result.

There has been no toxic action of the carbolic in any case so far observed, although the urine is sometimes darkened and of characteristic odor. The temperature falls rapidly. In several cases it is frequently necessary to support the patient with strychnine and whisky.—*Medical Record*.

TREATMENT OF CHANCROIDS.

Dr. M. Silverberg (*Pacific Medical Journal*, March, 1915), states that in the treatment of chancroids he avoids the use of cauterants or escharotics because his experience has shown that they cause extension of the ulcer. In his opinion, the two essentials are cleanliness and dryness. To secure the first he recommends frequent washing (every three or four hours) with a solution of mercury bichloride, 1 to 2,000. The sore is then thoroughly dried with a pledget of cotton and lightly dusted with some powder that is unirritating, that will absorb moisture without caking, and that will exert an astringent action. For this purpose he prefers iodoform in spite of its odor and the risk of dermatitis. It is employed in combination with equal parts of subgallate of bismuth, thoroughly mixed and finely pulverized. Ointments are to be avoided because they interfere with cleanliness. When the ulceration is progressive and is not arrested by this method, or when it is phagedenic, there seems to be nothing better than compresses of mercury bichloride, 1 to 2,000. For the treatment of bubo the author advises a 25 per cent ointment of ichthyol when the gland is small and not attached to the skin and before there is any redness. Later when suppuration has occurred, the abscess is opened through a half-inch incision, and the cavity dressed daily with gauze thoroughly impregnated with phenol-camphor. If phimosis is present in a case of chancroid the swelling should be reduced as far as possible with cold compresses of aluminum acetate (1 to 5), and the preputial sac irrigated with bichloride solution, 1 to 2,000, dried with cotton applicators, and dusted with the iodoform-bismuth mixture. If the

opening is too narrow for this treatment to be carried out, circumcision is preferred to dorsal splitting.—*International Journal of Surgery*.

CATARACT DUE TO ELECTRIC SHOCK.

On January 21, 1915, I examined a male aged 29 years, who gave the following history: "On November 13, 1913, while working on a scaffold 30 feet from the ground, his right shoulder came in contact with a cable carrying 22,000 volts of electricity; the current passed into the body and came out of the calf of the right leg. He fell to the ground, was unconscious for several hours and was under general treatment for several weeks.

He now complains of failing vision, nervousness, twitching of the face and a hesitating speech coming on some months ago.

Examination shows right eye a well developed cataract, vision being 3-200.

Left eye beginning cataract vision 10-20 by effort. Patient was seen but once, not returning as requested.

Dr. Posey of Philadelphia reports a similar case, an abstract of his article from the *Annals of Ophthalmology* appeared in this Journal in the January issue section of Ophthalmology.—*Pacific Medical Journal*.

BONE TRANSPLANTATION.

Experimental and clinical work has demonstrated to Lewis that the compact bone in a bone graft is gradually absorbed, that it is replaced by new bone formed from the periosteum and endosteum of the graft. The periosteum of bone into which the graft is inserted also plays an important role and should be saved and brought in contact with the periosteum of the transplant or over the ends of the same. This is now admitted by Barth, who first stated that a bone graft had merely an osteoconductive function. The viability of bone grafts is especially well indicated by their reaction to infection, for involucrum and sequestrum formation

occurs in infected grafts or in those placed in infected areas as it does in normal bone. Bone grafts placed in cavities, resulting from curettage of central giant-cell sarcomas or fibrous osteitis, will not survive in most cases, for the hematoma which occurs within the cavity prevents vascularization of the graft. The cavities can be closed most satisfactorily by a bone plug of some kind. The inlay graft in the treatment of old ununited or recent fractures is more satisfactory than the intramedullary splint, for the endosteum of the graft comes in contact with the endosteum of the bone and the periosteum of the bone can be sutured to the periosteum of the graft. In the intramedullary splint considerable endosteum is destroyed in preparing the medullary cavity for the reception of the graft, and the endosteum is one of the important factors in bone repair. Compact bone dies in the graft because of its physical properties, which do not permit of rapid permeation of serum. The best bone graft contains enough compact bone to give form and maintain fixation, and also contains periosteum and endosteum from which the compact bone is substituted. Grafts taken from the anteromedial surface of the tibia are to be preferred to those taken from the crest.—*The Journal of the American Medical Association*.

AIR EMBOLISM FROM THE USE OF OXYGEN INJECTIONS IN GAS GANGRENE.

Since oxygen injections are indicated in lesions due to anaerobic bacteria, such as gas gangrene, it need not surprise us to find occasional deaths from air embolism. Simmons states that the resource has become popular with military surgeons during the past few months. He has had, however, a death from an embolism from its use, as follows: The soldier was shot in the leg, and it was necessary to ligate the popliteal artery on account of the profuse hemorrhage. Gangrene of the foot followed, necessitating a Gritti thigh amputation. The operation wound supplicated and gas gangrene developed. The patient was etherized and oxygen injected into the stump with sudden fatal collapse. Autopsy

showed that patient had not been generally infected with gas gangrene bacilli and that the air bubbles in the right heart and pulmonary vessels had been injected from without. Simmons knows of two similar cases. Frankenthal also relates in great detail a case of the same sort. The resources will not be discontinued on account of these sporadic fatalities, but great care will have to be used. When the needle enters there should be no insufflation if blood flows.—*Medical Record*.

CANCER EXTRACTS IN THE TREATMENT OF CANCER.

The use of cancer autolysates in the treatment of cancer was suggested simultaneously in 1902 by von Leyden and Blumenthal and by Jensen. The method has been employed with numerous variations by many other investigators, apparently with little success. Blumenthal, who still clings to this conception as one that promises definite therapeutic results, believes that cancer extracts contain antibodies or anti-ferments. Lewin, Ehrhard, Bertrand, and others who have applied Blumenthal's theory have succeeded in eradicating rat sarcomata and mouse carcinomata, but in the case of cancerous growths in human beings they have succeeded only in improving the general condition and in checking the growth of the tumor.

In 1913, Stammer, however, reported that with the intravenous injection of cancer extracts he had succeeded in completely eradicating a secondary vaginal growth that had developed after the extirpation of a uterine carcinoma. Another line of investigation has consisted in effort to produce active immunization against cancer. The most fruitful results of this mode of treatment have been those reported by Fichera of Rome, who used autolysates of embryonal tissues, and Loeb and Fleisher of St. Louis, who injected intravenously such substances as casein and nucleoprotein.

Luckenbein (*Beiträge zur Klinik der Infektionskrankheiten und zur Immunitätsforschung*, Vol. III, No. 3), in reviewing this entire field, finds that both with the use of specific tumor extracts

and with the use of definite but non-specific protein substances, striking results have been obtained in arresting the development of malignant growths. He has evolved a method of treatment which he bases upon the following hypothesis: The substances that arouse the body to produce protective ferments reside in the nucleus of the cancer cells. As long as the nucleus is surrounded by the cell cytoplasm, the reactive power of the body is not stimulated. By injecting nuclear proteins into the circulation one may excite the production of the suitable protective ferments. These proteins are obtained from either sarcomata or carcinomata; in either instance they are said to be effective against both types of neoplasm. The mode of preparation is not explained. The therapeutic results so far obtained are said to be more favorable in sarcoma than carcinoma.—*Medical Record*.

RIGIDITY OF THE RIGHT EXTERNAL OBLIQUE IN APPENDICITIS.

Textbooks and literature on appendicitis have laid so much emphasis on rigidity of the right rectus muscle as a symptom, that many cases of appendicitis have been neglected, because of lack of rigidity of the right rectus muscle. Rigidity of the right rectus, we all agree, is the most reliable of the symptoms which we have in appendicitis. There are a few cases, however, in which rigidity of the right rectus is lacking, but if looked for, there will be found rigidity of the right external oblique muscle. The cases of rigidity of the right external oblique muscle, and absence of rigidity of the right rectus, pursue a peculiar course. All cases are considered mild, many patients are up and around, some attending to business, and only a high polynuclear count shows the seriousness of the disease. In over twenty cases seen the past year, in which there was rigidity of the right external oblique, and not of the right rectus, the appendix has been retrocolic or retrocecal in every case. This is a point to which the attention of the medical profession should be drawn, to avoid serious neglect and carelessness.—*The Journal of the Amer. Med. Asso.*

THE USE OF PITUITRIN AS A COAGULANT IN THE SURGERY --
OF THE THROAT AND NOSE.

In the *Journal of the American Medical Association* of January 23, 1915, Gordon tells us his experience with this plan of treatment.

Pituitrin was administered hypodermically in the dose of 12 minims to children and 15 minims to adults, not less than fifteen minutes before the intended anesthetic. The coagulation time was taken before and again after the fifteen-minute interval. The blood pressures were taken at the same intervals. The coagulation time was determined in the early cases with the Brodie and Russell coagulometer, and the remainder of the cases by the drop-on-the-slide method.

1. The coagulation time of the blood is materially reduced by the hypodermic administration of pituitary extract.

2. The hemorrhage following nasal and throat operations is much reduced, especially operations on the turbinates.

3. The effect on the blood-pressure of children is variable, as follows: Systolic pressure was increased in 55.31 per cent of the cases, reduced in 36 per cent and unchanged in 8.5 per cent. Diastolic pressure was increased in 35.5 per cent of the cases, reduced in 35.5 per cent, and there was no change in 29 per cent. Pulse pressure was increased in 61 per cent and decreased in 39 per cent of the cases—*The Therapeutic Gazette*.

MAGNESIUM SULPHATE IN TETANUS.

The *Medical Standard* cites Dreyfus, in *Therapeutische Monatshefte*, that the system, then, must be flooded with antitoxin by the intravenous, endoneural or intraspinal road until cure is assured, in that way endeavoring to antagonise the effects of the bacillus-derived toxin. Large doses of the antitoxin—500 A.-E. per day—are well borne.

Under no circumstances must the local treatment of the lesion be neglected.

In combating the convulsive outbreaks, there must be no stinting in the use of narcotics—morphine, morphine-scopolamine, chloral, veronal, luminal, or such like.

The treatment of tetanus with magnesium sulphate is a purely symptomatic measure, and is directed toward an elective paralysis of the nervous system. This salt should be given only in conjunction with the tetanus-antitoxin, whenever the latter is at disposal.

Because of the attendant risk of respiratory paralysis resulting, the intradural administration of magnesium sulphate is extremely dangerous. This method should be resorted to only when this danger can be met by instant tracheotomy, or else if the seriousness of the condition justifies taking this great risk.

The subcutaneous administration of the magnesium sulphate has given satisfactory results, while seemingly warranting smaller dosage.

Because of its pronounced effect upon the circulatory apparatus, great precaution is imperative as regards the total of dosage, and one should decide upon magnesium-sulphate injections only when the indications for its use are compelling, by the presence of a decided tonic muscular rigidity and severe trismus.

The dosage and the proper manner of administration of magnesium sulphate has not as yet been satisfactorily worked out.

The injection of phenol (carbolic acid) as proposed by Baccelli is a method that deserves receiving further careful testing. Particularly it should be ascertained whether, besides a symptomatic one, a truly etiologic therapy is here involved. However, here also the doses must be plenty large; say $\frac{1}{2}$ to $1\frac{1}{2}$ grams of phenol per day.

When antitoxin is not at command (as more than once is happening at present in the military hospitals) then at all events vigorous treatment with the narcotics and phenol injections should promptly be instituted, then proceeding to the magnesium-sulphate therapy, provided the latter is indicated by the factors above set forth, and relaxations of the musculature seems demanded.—*The Medical Brief.*

MEDICAL

PURPURA.

W. K. Silby reports the case of a healthy woman, aged 27, a widow, who had never had rheumatism or any other serious illness. Thirteen weeks before, what she described as blotches appeared first on her right arm in crops which faded and left a bruise, and a moderate boil was present on the left breast, which was painful. She had considerable pyorrhea alveolaris. Scattered over various parts of the body, especially marked over the posterior axillary folds, where they appeared in more or less parallel lines, looking like scratch marks, were numerous small subcutaneous hemorrhages of a purpuric nature; smaller ones were also present on the thighs. On the mucous membrane of the lower lip were remains of recent hemorrhages, which were also present on the palate. The patient stated that her gums bled considerably during her menstruation and often also her nose at these times. Her catamenia, which commenced at the age of 13, were usually regular and normal, but the last three periods had been severe, the last one continuing for a week.—*Proceedings of the Royal Society of Medicine.*

SOME VIRTUES OF PILOCARPINE.

R. J. Smith, in *Northwest Medicine*, states that pilocarpine has a double action, through the modification of the dosage. Thus, given in small doses, this alkaloid cures pytalism; in larger doses, this alkaloid cures pytalism; in larger doses it has the opposite effect—produces pytalism. In small dose, it is an arterial sedative, lessening the rapidity of heart action and reducing temperature, so that, for instance, in some cases of erysipelas, it often is to be preferred to aconitine; while, on the other hand, in large doses, it is antispasmodic, as, notably, in rigid os uteri.

Pilocarpine is useful for relieving the itching of jaundice. In this condition, the dose should be small and be given at short in-

tervals to effect. As it increases the flow of all the secretions it is unequaled as a diaphoretic, and given in full doses often will break up a cold. Also a full hypodermic dose of 1-6 to 1-2 grain not infrequently jugulates an attack of acute rheumatism, relieving the acute pain and swelling promptly. It is a remedy of positive value in the treatment of all muscular pains, including lumbago, pleurodynia and torticollis.

Smith also has found pilocarpine valuable in eclampsia and uremia, probably because it produces free elimination. In eclampsia, he uses it in association with veratrine.

Given early, pilocarpine will cut short an attack of mumps. It also is found useful in treating the eruptive fevers, especially when the eruption is delayed. It is almost a specific in erysipelas of the sthenic type. Also, it is one of the best remedies for breaking up the chill of malaria. Asthma, pertussis, edema of the glottis, mania, and dryness of the mouth from any cause, are all successfully treated with this remedy.

The drug is also recommended in a variety of other conditions too numerous to mention in this short abstract. For one thing, the statement is repeated that it stimulates the growth of the hair when applied locally and taken internally; it also is said to darken its color. We should like to get some plausible evidence that it has this effect on hair growth. Who can supply it?—*The Medical Brief*.

MYELITIS IN CHILD.

The patient was a boy, aged 5½ years, who first complained of vague pains in the chest. The parents also noticed that he was slowly losing the use of his legs. The family history was good, and previous to the onset of the illness he had always been healthy. He had not had any of the infectious fevers. When seen by his physician there was complete paralysis of both legs and back, with anesthesia extending from the toes up to a line drawn around the chest just below the nipples. The knee jerks were much exaggerated, and there was a Babinski sign present on both sides.

The abdominal reflexes were absent. There was no optic neuritis and no impairment of the mental power. The upper extremities and neck were unaffected. The urine was normal, but continually dribbling away, and there was also incontinence of feces during his stay in the hospital, and up to the time of death he complained of vague pains in the chest and in the upper abdomen, but his general condition remained the same till just before he died.

There was only a slight rise of temperature on and off throughout the illness, but just before death he had hyperpyrexia. He had a small bed-sore on admission to the hospital, which, however, soon healed. The heart and lungs were normal. After three weeks, the anesthesia, which had remained at the same level, began to increase upward and he became rapidly worse, no doubt due to the vital centers becoming affected. There was no improvement with potassium iodid, no family history of syphilis, and the Wassermann test was negative. There was no spinal caries nor injury, and the case was quite unlike anterior poliomyelitis or a spinal growth. The disease seemed to spread up the cord quickly at first, became stationary for a time, and then advanced till the vital centers were affected.—*The Journal of the American Medical Association.*

HOME TREATMENT OF SCIATICA.

Pœppelmann (*Aerztl. Sammelbl.*) suggests the following method for the *home treatment of sciatica*. A pail of boiling water is placed in a tub large enough to permit an old chair to be set in it. A tablespoonful of ol. pini sylvestris is poured into the boiling water, the patient seated on the chair with his feet outside the tub, and two sheets pinned around his neck, so that they reach the floor on all sides, covering him completely but leaving the head free. In this steam-bath the patient is allowed to remain for twenty minutes. He is then rubbed briskly with a cold wet cloth, dried, and put to bed for an hour. If necessary, especially with elderly people, cold applications may be made to the head

during the process of steaming. Internally, iodides are given, preferably iodine-vasogen, 7-8 drops three times daily. The bowels must be kept freely open. The baths are given every other day, and five to fifteen sittings are required for a cure. In the author's hands a successful outcome has been practically uniform.—*The Critic and Guide*.

FACTS ABOUT RATTLESNAKE VENOM.

Although rattlesnake poisoning has lost most of its former prominence as a cause of death in the United States, the toxic agent itself continues to be a source of scientific interest. Certain points in regard to its action have been debated. Thus it has been asserted that the venom of the rattlesnake is toxic to this species itself. Recently, however, Welker and Marshall of the Robert Hare Chemical Laboratory at the University of Pennsylvania, Philadelphia, have injected the fresh poison obtained directly from the living animal intramuscularly into the same species, *Crotalus adamanteus*, without detecting any untoward effects on the snakes. Rattlesnake serum may be somewhat toxic to certain laboratory animals, but not more so than is the serum of other species. It is said that snake venom exhibits little if any toxicity when it is administered by way of the alimentary canal. This has led to the assumption that the bile exerts antitoxic properties to it. Fraser, for example, believed that snake bile had a marked antitoxic action on the venom—an effect exhibited likewise by ox bile in a less marked degree. Welker and Marshall have found that the bile of the rattlesnake is not highly toxic for pigeons, with which they experimented; but they failed to demonstrate the slightest antitoxic power in this secretion.—*The Journal of the American Medical Association*.

RHEUMATIC FEVER AND RHEUMATOID ARTHRITIS.

J. T. Clarke summarizes the various theories of the etiology of rheumatoid arthritis as follows: (1) It is a neurosis; (2) there

is a deficiency of lime salts; (3) it is due to a disturbance of metabolism (4) it is caused by absorption from chronic sores such as those of pyorrhea alveolaris, or those in the region of the anus; (5) it is due to insufficient sweating; it has a relationship to rheumatic fever; it is a specific disease. Of these the first four are just as likely to occur in the tropics as in the temperate climates, and the fifth is just as likely to be an effect as a cause and is very variable in different people in the tropics. No. 6 of these theories is supported by the geographical distribution. Neither rheumatoid arthritis nor rheumatic fever occurs in the tropics, and both are common in certain parts of the temperate zones. The author adds to the reasons for believing that rheumatoid arthritis is a specific disease and that it may have a relationship to rheumatic fever or possibly require that disease as an antecedent; and believes that the knowledge that these two diseases are absent from the tropics may give a clue to their etiology, but especially to the etiology of rheumatoid arthritis. Egypt is regarded as providing an almost certain cure for rheumatoid arthritis.—*Medical Record*.

THE ACTION OF BENZOL AND ITS HOMOLOGUES.

In 1897 Santesson noted among the symptoms of benzol poisoning in workers exposed to the vapors of this substance a pronounced diminution in white blood cells. Thirteen years later Selling of the Johns Hopkins Hospital reported three cases of benzol poisoning in young girls in whom a marked purpura hemorrhagica was associated with a considerable degree of leucopenia. Two of these patients died and the principal autopsy finding was an intense atrophy of all of the hematopoietic organs. On the basis of the above observations, Koranyi essayed with success the use of benzol as a therapeutic agent in severe cases of leucemia. This experience has been confirmed by a host of others although a number equally as great have reported failures.

Recently Guiberto Bianchi (*Archivio per le Scienze Mediche*, April 1, 1915), has studied the effects upon the blood of benzol and its homologues, tutuol, xylol, and cumol. He finds that

benzol produces in man as well as in animals a definite leucopenia as well as an almost total atrophy of the leucopoietic apparatus. On the other hand, the other hydrocarbons belonging to the same group and having a saturated side chain, namely, toluol, xylol, and cumol, produce in the rabbit a distinct leucocytosis and a hyperplasia of the leucopoietic elements, more especially of the bone marrow. As regards the effect upon the red blood cells, benzol as well as its homologues causes a moderate diminution amounting to about 20 per cent. The blood platelets behave in a different manner. Under the influence of benzol they disappear almost entirely from the circulation; whereas under the influence of toluol, xylol, and cumol they show a relative and persistent increase in number.

The outstanding feature of the above investigation is the fact that benzol and its homologues have a similar action upon the white blood cells, the leucoblastic elements, and the blood platelets; whereas they have little or no influence upon the red blood cells or erythroblasts. Indirect evidence is also furnished in opposition to the view that the blood platelets are derived genetically from the red blood cells.—*Medical Record*.

OBSTETRICAL

NITROUS OXIDE GAS ANALGESIA IN OBSTETRICS.

The *Journal of the American Medical Association* of March 6, 1915, contains an article by Webster in which he states that from his experience in the Presbyterian Hospital of Chicago this method is recommended as the safest and simplest method of conducting painless labor. Its advantages are as follows:

1. The apparatus is simple, easily transported, and may be used by any practitioner.
2. Deep anesthesia is not necessary.
3. There are no ill effects to mother or child.

4. The strength of uterine contractions is not diminished, no matter how long the administration of the nitrous oxide gas is continued.

5. The administration is under control all the time, and can be stopped at any moment. This is a very decided advantage which is not possessed by any method which necessitates placing a patient under the influence of drugs administered internally.—*The Therapeutic Gazette*.

THE QUESTION OF LEGALIZING ABORTION IN CASES OF MILITARY RAPE.

It is being seriously discussed in Europe. Dr. Depasse, Bull. et Mem. de la Soc. de Med. de Paris, Mch. 1915, mentions a number of cases, six then under observation by Dr. Cabanes. A particularly sad case was that of a mother and two daughters, raped in their own home by 17 German soldiers. All pregnant. In various instances, pregnant women had threatened suicide if not aborted and he knew of two instances in which the threat had been carried out. German physicians have reported practically identical experiences and have raised the same ethical and legal issues. It is a sad old story, repeated in every war and with little regard for nationality though, of course, less frequent under modern and more enlightened military rules and discipline.—*Buffalo Medical Journal*.

TREATMENT OF PUERPERAL ECLAMPSIA.

Eclampsia is one of the most sinister complications of pregnancy and labor, and unfortunately no unanimity has yet been reached as to its treatment. Some still advocate expectant treatment, others are for immediate operation. In an article entitled "Conservative vs. Radical Treatment of Eclampsia" (*Lancet-Clinic*) Dr. J. H. Carstens reaches the following conclusions:

"First: Pregnant women should have their blood pressure taken frequently, and also have the urine examined.

Second: If symptoms of toxemia develop, a most restrictive diet should be started and the woman placed in a position where she can have prompt medical attendance. Preferably in a hospital.

Third: If convulsions occur, premature delivery should be brought about by slow process, if the case is mild.

Fourth: In severe attacks or convulsions, immediate delivery should be instituted by the so-called vaginal Cesarean section, if the woman is about seven months or thereabout.

Fifth: If the woman is at full term, and especially in a primipara, an abdominal Cesarean section should be the operation of choice."—*The Critic and Guide*.

NORMAL PERIOD OF GESTATION IN MAN.

From a statistical investigation of 511 normal confinements of South Australia females, comprising 247 confinements, yielding male infants and 264 confinements yielding female infants, it is concluded by Robertson that the mean length of periods of gestation yielding males is 282.5 days with a probable error of ± 0.55 days and a variability of 4.47 per cent. The mean length of periods of gestation yielding females is 284.5 days with a probable error of ± 0.57 days and a variability of 4.85 per cent. The probability of the truth of the conclusion, based on the above estimates, that the periods of gestation yielding females are longer than those yielding males is 142.1.

There is only one period, the "normal" period at which the percentage of infants delivered by normal mothers attains a maximum. Subsequent to a very early period in the development of the fetus, there is no evidence of a "critical period" in the intra-uterine growth of man such as occurs in the intra-uterine growth of guinea pigs. The deviation of normal periods of gestation from the mean are fortuitous in origin.

The chances are a million to one against a male child being delivered at the termination of an otherwise normal pregnancy before 224 days or of a female child before 222 days after the onset

of the last menstruation. Hence all 7-months children (210 days) may legitimately be regarded as the fruit of pathologic pregnancies. The length of the period of gestation is very much less variable in normal females, than the weight of the infant which is delivered. From this fact it is inferred that the length of the period of gestation in normal females is primarily determined, not by the fetal development, but by a maternal cycle of events which is to a considerable extent independent of the stage of developments attained by the fetus.—*The Journal of the American Medical Association.*

SALVARSAN IN PREGNANCY.

This article includes reports of both clinical and experimental experience, with a cursory review of work done by others in this line. The findings in forty-three cases during the pregnancy and afterward in both mothers and children are tabulated under various headings. It does not seem possible for arsenic to traverse the sound placenta, and the undoubted benefit from salvarsan treatment of the pregnant woman must be indirect, the result of the improvement of the mother under the salvarsan. It probably also renders the placenta less permeable for the syphilitic toxins. The drug was borne well by the women; there never was hemorrhage or abortion after intravenous injection of the salvarsan, and none of the fetuses died on account of the medication. Of the thirty-seven women given an adequate course of the salvarsan treatment, 86 per cent of their children were living ten days after birth; 15.8 per cent of the children had a positive Wassermann at birth.—*Journal of the American Medical Association.*

BLADDER IRRIGATION.

In fifteen years' experience with the treatment of cystitis in women, Ellice McDonald (*J. A. M. A.*) has tried a great number of substances for irrigation solutions. The requisite for an irrigating solution in these cases is that it should be non-irritating,

easily obtained, antiseptic, stimulating and healing to inflamed surfaces. She has found quinin bisulphate to best fulfil these requirements. It is easily soluble in water, comparatively non-irritating, and distinctly antiseptic. She has employed it now for eight years, and called attention to its value in 1908. She discusses the relative antiseptic cures, and according to her experiments she finds that mercuric chlorid will inhibit bacterial growth in a strength of 1 to 50,000; chinosol in 1 to 40,000; and quinin bisulphate in 1 to 30,000. It is particularly satisfactory, she says, to have so strong an antiseptic solution with these other good qualities.—*Critic and Guide*.

TETANUS NEONATORUM.

Within a very recent period several cases of this supposedly incurable condition have responded successfully to treatment, which consisted of or included the use of magnesium sulphate. In the *Deutsche medizinische Wochenschrift* for April 22, we find a belated account of a discussion on this affection which took place just before the breaking out of the war. Czerny laid stress upon the fact that tetanus bacilli are not found in umbilical infection of the newly born, but was set right on this point by Baginsky who remarked that Kitasato had found the bacilli in pus from the navel. Finkelstein stated that trismus nascentium so-called was by no means always a tetanus and was often due to skull traumas and encephalitis. Further the geographical pathology has been neglected. Tetanus (infectious of the newly born is rare in Germany, but common in Roumania. Negative bacillary finds signify but little in the presence of positive finds of other sorts. Czerny in alluding to cases in the tropics adds that umbilical antisepsis has not prevented tetanus. He has been on the hunt for tetanus germs in the navel for twenty-two years and has yet to find one. Tetanus of the newly born is not due to infection in the ordinary sense but belongs under the nervous affections. The consensus of opinion appeared to be that this question should be left open. The influence of magnesium in such a neurosis could be readily understood. None of those who discussed the

paper threw any light on the alleged neurotic tetanus of the newly born, with reference to its intimate nature, and they left undetermined the question of its bacterial origin.—*Medical Record*.

SCOPOLAMINE-MORPHINE TREATMENT IN LABOR.

J. L. Baer concludes from his experience that the prolongation of labor, the increase in the number of fetal asphyxias, the excessive thirst and intense headaches that are so distressing, the difficult control of patients and avoidance of infection by soiling of the genitals, the more frequent postpartum hemorrhages, the blurred vision, the ghastly deliriums persisting far into the puerperium, the inability to recognize the onset of the second stage unless by risk of more frequent examinations, the masking of early symptoms such as antepartum hemorrhage, rupture of the uterus and even eclampsia, the violence and uncertainty of the whole treatment, the general bad impression given to one's patients who are being taught to approach the "horrors of labor" in fear and trembling, constitute so severe an arraignment of this treatment of labor cases that the author feels compelled to condemn it, leaving open the question of the merits of a single dose of morphine and scopolamine in those cases in which morphine and atropine have hitherto been given.—*Medical Record*.

PHYSIOLOGY AND PHARMACOLOGY OF THE EXCISED HUMAN UTERUS.

Charles C. Lieb, New York (*American Journal of Obstetrics*, February, 1915), has recently made some most interesting studies on the physiology and pharmacology of the excised human uterus. After describing in detail the experiments undertaken and giving a large number of the muscular movements of the uterus under the influence of epinephrine, ergotoxine, paraphydrox-zphenyl-ethylamine, beta-amidoazolyethylamine, ergot and pituitary extract, Lieb says: It will be noted that in these experiments the

non-pregnant and the parturient uterus react differently to pituitary. The non-pregnant uterus is unaffected or is depressed; the parturient uterus is stimulated. To what is this change due? The simplest explanation would be that, like the cat's uterus, the human organ changes its innervation, or rather, during pregnancy its motor innervation becomes predominant. Such, however, is not the case, for epinephrine produces stimulation of the human uterus whether it is pregnant or not. Nor does the parturient organ appear more sensitive to epinephrine. The only explanation which offers itself is that some substance sensitizes the uterus to pituitary. What this substance is, whether it is maternal or fetal in origin, I do not know. The sensitizer is certainly not epinephrine.

Here the matter must rest till further investigation offers a satisfactory explanation of the difference in the effect of pituitary on the parturient and the non-pregnant uterus. The difference in the response of the two types of uteri throws some light on the discordant results which are said to follow its therapeutic use.

Quigley has made a very careful review of the clinical literature. From these reports and his own cases he concludes that pituitary extract is an efficient ecboic only after labor has begun. Humpstone declares that pituitary will not induce labor, and Hirsch has reported that it is of no value as an abortifacient. Patek claims that pituitary allays threatened abortion while Fischer urges that it be employed to complete a miscarriage. Grunbaum finds that the drug has no effect in hastening abortion. These apparently divergent effects may be harmonized by assuming that the uterus must be sensitized before it will respond to the systemic administration of pituitary. During labor the uterus is so sensitized, and hence its almost invariable stimulation. In earlier stages of pregnancy the uterus may be sensitized or not. If it is, pituitary will complete an abortion or miscarriage. If it is not sensitized, the administration of the extract is not followed by stimulation of the uterus. During threatened abortion a non-sensitized uterus may remain unaffected or it may be depressed. If it is depressed by pituitary the abortion is allayed. If the uterus is not affected the course of the miscarriage is not shortened.

How early may the uterus become sensitized to pituitary? The experiment on the tubal pregnancy indicates that within six weeks after conception pituitary may have a stimulating effect. This also indicates quite clearly that unless we regard tubal rupture as the result of true labor contractions, we can not assign to the posterior lobe of the hypophysis the role of hormone for the induction of normal labor. It is true that during pregnancy the pituitary gland hypertrophies and that after the expulsion of the fetus retrograde change occur. This hypertrophy is limited to the true glandular lobes, the anterior and middle divisions. The posterior lobe shows no sign of increased activity. But it is from the posterior lobe and from this alone that the ecboic principle can be obtained. Furthermore, Kohn denies the existence of an active substance in the posterior lobe during life. He believes that extracts of the gland owe their activity to some decomposition product which is formed during the manufacture of the extract. These facts seem to indicate that the posterior lobe is not concerned with normal labor. Though extracts of the posterior lobe are pharmacologically very active, the lobe itself is not essential to life. Complete removal of this portion of the gland does not interfere in any way with normal bodily activity. It is the interior lobe which is essential to life. Oddly enough, extracts of this lobe have not shown to have a demonstrable pharmacological activity. But it is this lobe which hypertrophies during pregnancy. It is apparent that if the pituitary gland is to be regarded as intimately concerned with the onset of labor, the hormone should be sought not in the posterior lobe, but in the anterior portion of the gland.—*The Lancet-Clinic*.

Editorial

PUBLISHER'S NOTICE—The Journal is published in monthly numbers of 48 pages at \$1.00 a year, to be always paid in advance.

All bills for advertisements to be paid quarterly, after the first insertion of the quarter.

Business communications, remittances by mail, either by money order, draft, or registered letter, should be addressed to the Business manager, C. S. Briggs, M. D. corner Summer and Union Streets, Nashville, Tenn.

All communications for the Journal, books for review, exchanges, etc., should be addressed to the Editor.

THE CANCER PROBLEM.

In spite of the wonderful advances of surgery since the discovery of anesthetics, and the later discovery of antiseptic and aseptic surgery; in spite of the wonderful strides made by internists and pathologists in the eradication or partial control of such diseases as smallpox, cholera, typhus, typhoid, yellow fever, malaria, diphtheria, hydrophobia, tuberculosis and many other diseases; in spite of the wonderful improvements made in our medical school curricula and the better preparation of our young men for the study of the problems of medicine and surgery; in spite of the fact that states, institutions and individuals are spending millions annually in the search for the truth; in spite of every effort, cancer remains today as it did 2,000 years, perhaps millions of years before Christ, the unsolved, but let us hope not unsolvable, cause of death to a large percentage of the earth's inhabitants.

With such a mighty force of money, science and individual effort arrayed against only one part, but not a small part, of the ills to which human flesh is heir, it seems that the race of neoplasms whose king is cancer, must soon succumb, no matter how well it might be surrounded and protected by the mysteries of nature.

Trauma, chronic irritation, heredity, developmental defects, climate, food, occupation, previous immunity from other diseases, such as the exanthemata, scars, personal contact, and finally infec-

tion from protozoa or ultramicroscopic bacteria, have each and all been urged as predisposing or exciting cause of cancer, but unfortunately not one of the etiological factors is constant enough in any one tumor to prove it beyond doubt the *cause*. We might say without fear of contradiction that age is the most important predisposing cause, and yet one form of malignant growth, e. g., sarcoma, is rather frequent in young individuals; indeed carcinoma itself occasionally occurs in the young and in such cases the malignancy is increased.

The study of tumors, especially in relation to embryology and teratology, shows that Cohnheim evolved a scientific theory which apparently fits many kinds of tumors, when he maintained that tumors developed from embryonic cell-rests. But that excellent theory can not be made to explain the origin of all tumors, nor does it explain the ultimate cause, e. g., what causes these embryonic cell-rests to proliferate and why do the most malignant cell-rests wait until old age before commencing their mad and wild autonomous proliferation.

This question which has so long baffled the physician, may now be answered any day and again it may seem even more unanswerable a hundred years hence than today.

In the meantime every physician should do his part by earnestly studying the problem, should fight the quacks who pretend to cure this disease and thus often allow an operable case to pass into the inoperable stage, and finally should try to instil into his patients a knowledge of the true nature of the malady in order that they may come to him early should a tumor develop or suspicious symptoms arise.

Could doctors persuade patients to have a thorough examination twice yearly, many cases would be discovered earlier and the percentage of cures would increase. Dentists have done much in educating the public to report for frequent examinations and there is no reason why physicians can not do the same.

Articles in the lay magazines and newspapers are commendable, but such articles should come from institutions rather than individuals. Some of the profession's greatest men are guilty of lay press advertising, and this can not be too strongly condemned.

Any medical school should be willing to go on record as endorsing an educational article, provided the article is well written and accurate. Judging from some of the articles we have read in the lay press during the last year or so, we believe all self-respecting editors would act wisely in having some one competent to judge, read and approve all articles dealing with medical subjects. The editor of a magazine, no matter how good an editor he may be, is no more qualified to correctly judge the worth of an article on a medical subject, than is a physician able to judge the correctness of an article on astronomy.

Let us hope for public enlightenment on the subject of disease in general and more especially the subject of cancer, but let us trust that none of our profession will use the desire to help the people as a means of advertising himself.—*W. T. B.*

“ARTICLES OF FAITH” CONCERNING CANCER.

A Platform upon which to Unite in the Campaign of Education.

During the four-day Cancer Education Campaign, held under the auspices of the Vermont State Medical Society, June 8-11, 1915, Dr. William Seaman Bainbridge, of New York City, presented the following twenty-one “Articles of Faith” at several sessions. They form the conclusion of a paper entitled “THE CANCER PATIENT’S DILEMMA. A Plea for the Standardization of What the Public Should Be Taught in the Campaign of Education Concerning Cancer,” which Dr. Bainbridge read at one of the sessions, and which appears in full in the Cancer Number of the *New York Medical Journal*, July 3, 1915.

(1) That the hereditary and congenital acquirement of cancer are subjects which require much more study before any definite conclusions can be formed concerning them, and that, in the light of our present knowledge, they hold no special element of alarm.

(2) That the contagiousness or infectiousness of cancer is far from proved, the evidence to support this theory being so incomplete and inconclusive that the public need have no concern regarding it.

(3) That the communication of cancer from man to man is so rare, if it really occurs at all, that it may be practically disregarded.

(4) That those members of the public in charge of or in contact with sufferers from cancer with external manifestations, or discharges of any kind, need at most take the same precautionary measures as would be adopted in the care of any ulcer or open septic wound.

(5) That in the care of patients with cancer there is much less danger to the attendant from any possible acquirement of cancer than there is of septic infection, or blood poisoning from pus organisms.

(6) That in cancer, as in all other diseases, attention to diet, exercise and proper hygienic surroundings is of distinct value.

(7) That, notwithstanding the possibility of underlying factors, cancer may, for all practical purposes, be at present regarded as local in its beginning.

(8) That, when accessible, it may, in its incipency, be removed so perfectly by radical operation that the chances are overwhelmingly in favor of its non-recurrence.

(9) That, when once it has advanced beyond the stage of cure, suffering in many cases may be palliated and life prolonged by surgical and other means.

(10) That while other methods of treatment may, in some cases, offer hope for the cancer victim, the evidence is conclusive that surgery, for operable cases, affords the surest present means of cure.

(11) That among the many advances in and additions to cancer treatment, the improvements in and extensions of surgical procedure surpass those in any other line, and fully maintain the preëminent position of surgical palliation and cure.

(12) That there is strong reason to believe that the individual risk of cancer can be diminished by the eradication, where such exist, of certain conditions which have come to be regarded as predisposing factors in its production.

(13) That some occupations, notably working in pitch, tar, paraffin, anilin or soot, and with X-rays, if not safeguarded, are con-

ductive to the production of cancer, presumably on account of the chronic irritation or inflammation caused.

(14) That prominent among these predisposing factors, for which one should be on guard, are: general lowered nutrition; chronic irritation and inflammation; repeated acute trauma; cicatricial tissue, such as lupus and other scars, and burns; benign tumors, warts, moles, nevi (birth-marks), etc.; also that changes occurring in the character of such tumors and tissues, as well as the occurrence of any abnormal discharge from any part of body, especially if blood-stained, are to be regarded as suspicious.

(15) That while there is evidence that cancer is increasing, such evidence does not justify any present alarm.

(16) That suggestions which are put forward from time to time regarding eugenic, dietetic and other means of limiting cancer, should not be accepted by the public until definitely endorsed by the consensus of expert opinion. Such consensus does not exist today.

(17) That so far as we know there is nothing in the origin of cancer that calls for a feeling of shame or the necessity of concealment.

(18) That it will be promotive of good results if members of the public who are anxious about their health and those who wish to preserve it will, on the one hand, avoid assuming themselves to be sufferers from one or another dreadful disease, but, on the other hand, will submit themselves periodically to the family physician for a general overhauling.

(19) That at all times and under all conditions there is much to be hoped for and nothing to be feared from living a natural and moderate life.

(20) That the finding of any abnormal condition about the body should be taken as an indication for competent professional and not personal attention.

(21) That watchwords for the public until "the day dawns" and the cancer problem is solved, are: Alertness without apprehension, hope without neglect, early and efficient examination where there is doubt, early and efficient treatment when the doubt has been determined.

AMERICAN MEDICAL ASSOCIATION.

The new officers of the American Medical Association are: President, Surgeon General Rupert Blue, Washington, D. C.; First Vice-President, Dr. Albert Vander Veer, Albany, N. Y.; Third Vice-President, Dr. Donald Campbell, Butte, Mont.; Fourth Vice-President, Dr. Herbert C. Moffit, San Francisco, Cal.; Secretary, Dr. Alexander R. Craig, Chicago, Ill.; Treasurer, Dr. William Allen Pusey, Chicago, Ill.; trustees, Dr. M. L. Harris, Chicago, Ill.; Dr. W. T. Councilman, Boston, Mass., and Dr. Thomas McDavitt, St. Paul, Minn.; members of Judicial Council, Dr. Jas. E. Moore, Minneapolis, Minn.; Dr. Randolph Winslow, Baltimore, Md.; member of Council on Health and Public Instruction, Dr. Milton Board, Louisville, Ky.; member of Council on Medical Education, Dr. R. C. Coffey, Portland, Ore.; Council on Scientific Assembly, Dr. George H. Simmons, Chicago, Ill.; Dr. Richard S. Morris, Clifton Springs, N. Y.; Dr. E. S. Judd, Rochester, Minn.; Dr. J. Shelton Horsley, Richmond, Va., and the Secretary (Dr. Alexander R. Craig), member ex officio. The place chosen for the next meeting is Detroit, Mich.

OBITUARY.

We note with deep regret the death of Dr. John M. Briggs, of Woodburn, Ky., who died at his home, of stomach trouble at the age of 75. Dr. Briggs practiced medicine all his life in that section of southern Kentucky, and was much beloved by all with whom he was brought in contact. He lived a busy and useful life and leaves behind him an enviable record of probity and high standing.

Reviews and Book Notices

"Progressive Medicine"—A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College, Philadelphia; Physician to the Jefferson Medical College Hospital; one Time Clinical Professor of Diseases of Children in the University of Pennsylvania; Member of the Association of American Physicians, etc. Assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College; Ophthalmologist to the Frederick Douglass Memorial Hospital; Instructor in Ophthalmology, Philadelphia Polyclinic Hospital and College for Graduates in Medicine. Volume II. June, 1915. Hernia—Surgery of the Abdomen, Exclusive of Hernia—Gynecology—Diseases of the Blood. Diathetic and Metabolic Diseases. Diseases of the Spleen, Thyroid Gland, Nutrition, and the Lymphatic System—Ophthalmology. Lea & Febiger, Philadelphia and New York. 1915.

This number of the popular quarterly is unusually voluminous and exceptionally valuable. No other publication is in its class with this serial. It represents the best thought and most advanced progress of the workers of the profession. The practitioner who avails himself of opportunities presented by securing this publication, gets in condensed form the very cream of up-to-date progress. The contributors to this volume are William B. Coley, M.D., Hernia; John C. A. Gerster, M.D., Surgery of the Abdomen, exclusive of Hernia; John G. Clark, Gynecology; Alfred Stengel, M.D., Diseases of the Blood, etc.; Edward Jackson, Ophthalmology, and Index.

"Forty-first Annual Report of the Secretary of the State Board of Health of the State of Michigan for the Fiscal Year Ending June 30, 1913."—By Authority. Lansing, Michigan. Wynkoop-Hallenbeck-Crawford Co., State Printers, 1914.

We acknowledge with thanks the receipt of this well prepared report of a very wide awake State Board of Health. It contains much that is instructive and interesting to the general practitioner, and is even more useful to all interested in sanitary science.

A feature of this report that commends itself is the admirable arrangement of its contents.

Publisher's Department

MEXICAN DRUGS.

The warlike disturbances in old Mexico are responsible for many troubles of manufacturers and importers of botanical drugs. Mexico is the source of quite a number of our medicinal plants, and some of these are practically unobtainable. It seems to be unsafe for the peons, who usually work under the supervision of a professional collector, to venture far away from settlements, and even when they succeed in gathering a shipment, there is no guarantee that it will ever reach the border. For more than twenty years *Cereus Grandiflorus*, used in the manufacture of Cactina Pillets, has been cut on the mountain slopes of the Vera Cruz range situated in the state of Tamaulipas. The Sultan Drug Company states that very few shipments have found their way into the United States, and at one time they were greatly concerned about the safety of one of their collectors, an American, who has lived in Mexico many years. For some time past the Sultan Drug Company has been carrying at least a year's supply of *Cereus Grandiflorus* ahead, as the dangers of this unsettled condition were anticipated.

"Chemical Food" is a mixture of phosphoric Acid Phosphates, the value of which physicians seem to have lost sight of to some extent in the past few years. The Robinson-Pettet Co., incorporated, to whose advertisement in this issue we refer our readers, have placed upon the market a much improved form of this compound, "*Robinson's Phosphoric Elixir*." Its superiority consists in its uniform composition and high degree of palatability.

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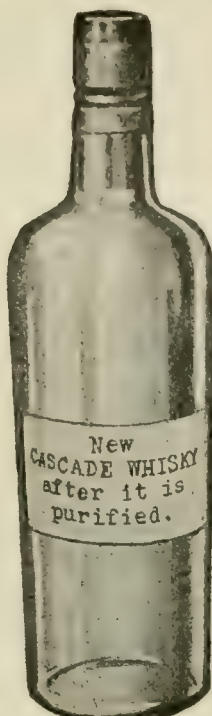
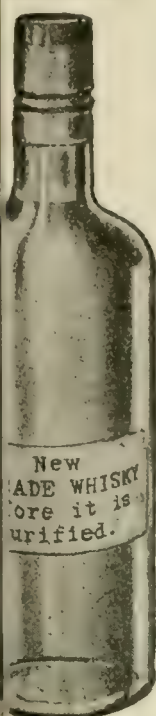
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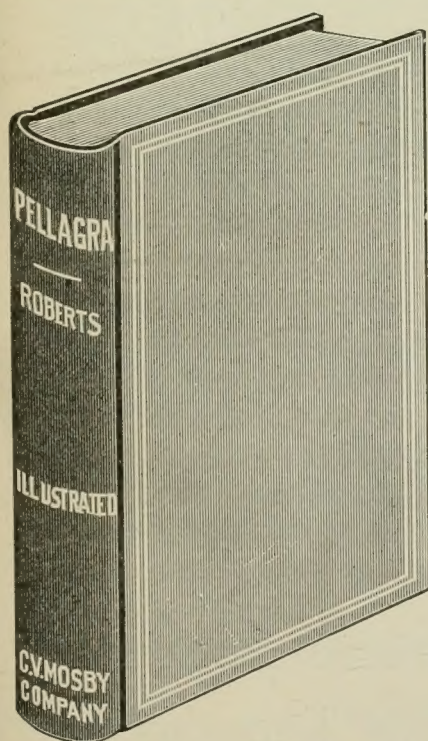
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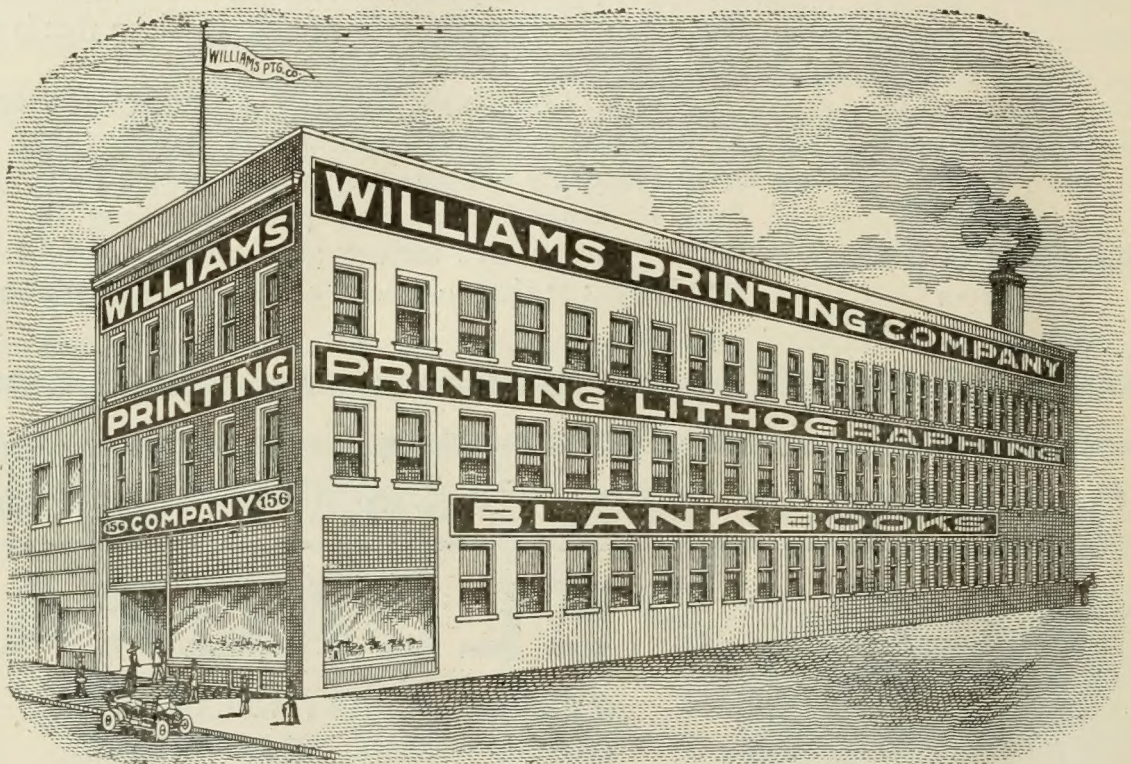
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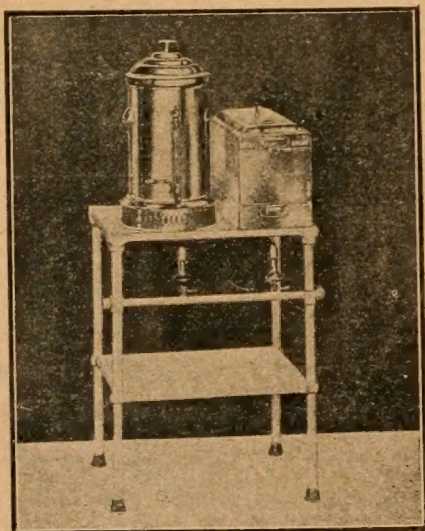
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